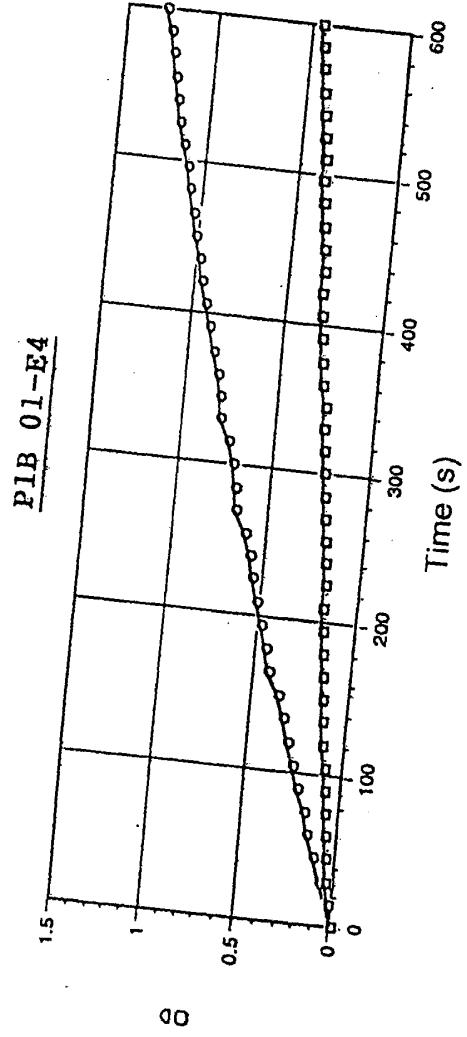


$$V_{app(S)} = 21.8 \quad V_{app(R)} = 14.9 \quad E_{app} = 1.5$$

FIG. 1A

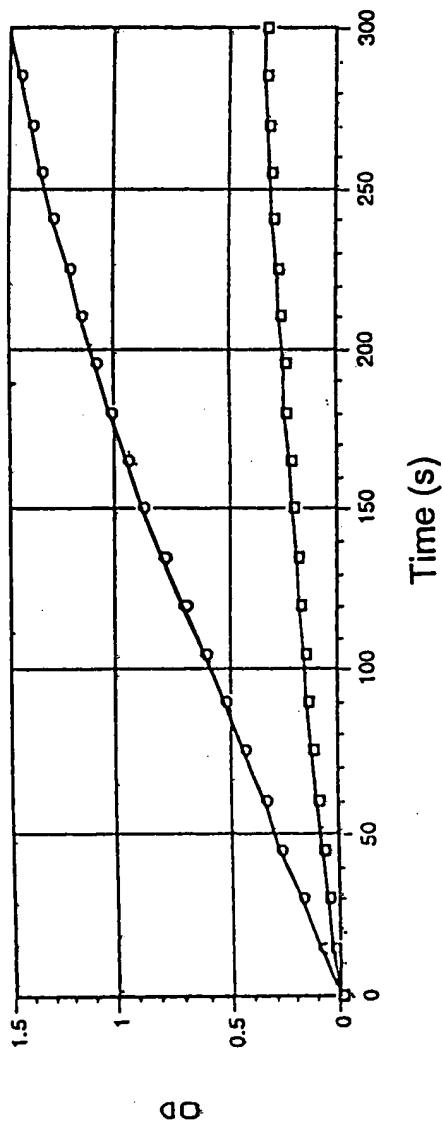


$$V_{\text{app}}(S) = 128.4 \quad V_{\text{app}}(R) = 43.2 \quad E_{\text{app}} = 3.0$$

FIG. 1B



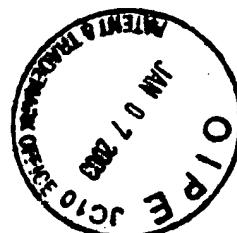
P2B 08-H3



$$V_{app}(S) = 310.8 \quad E_{app} = 4.6$$

$$V_{app}(R) = 67.4$$

FIG. 1C



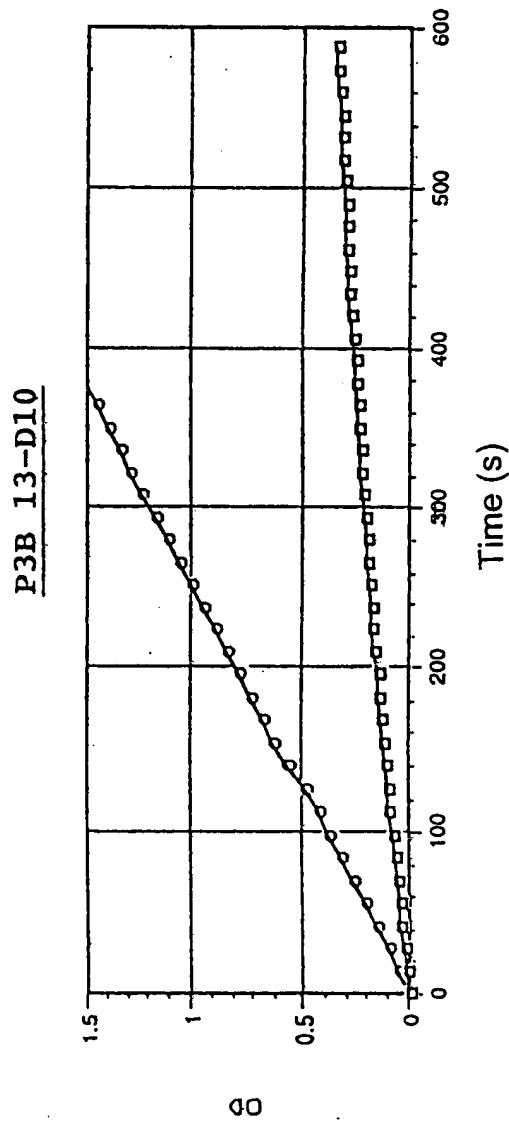
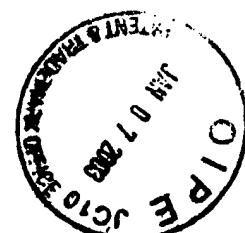


FIG. 1D



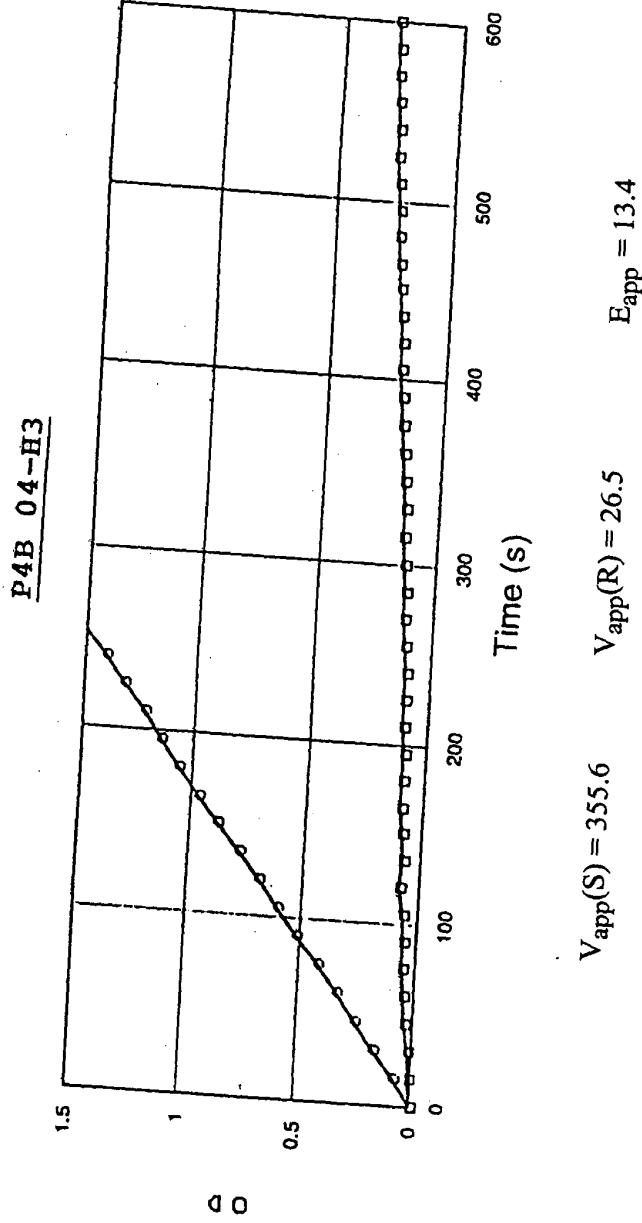
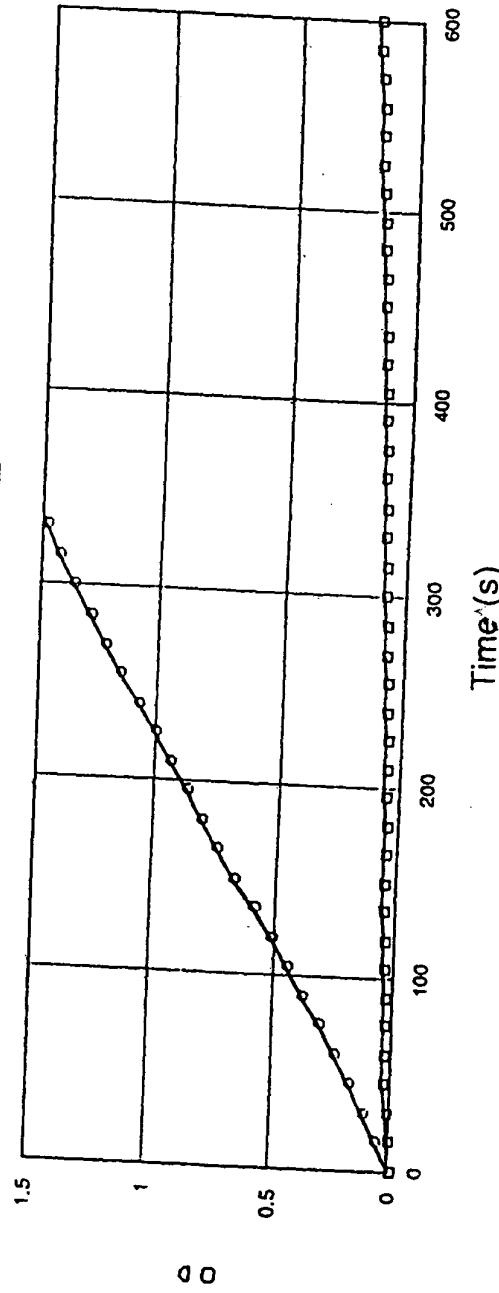


FIG. 1E

P5B 14-C11



$$V_{app}(S) = 275.9 \quad V_{app}(R) = 17.3 \quad E_{app} = 15.9$$

FIG. 1F

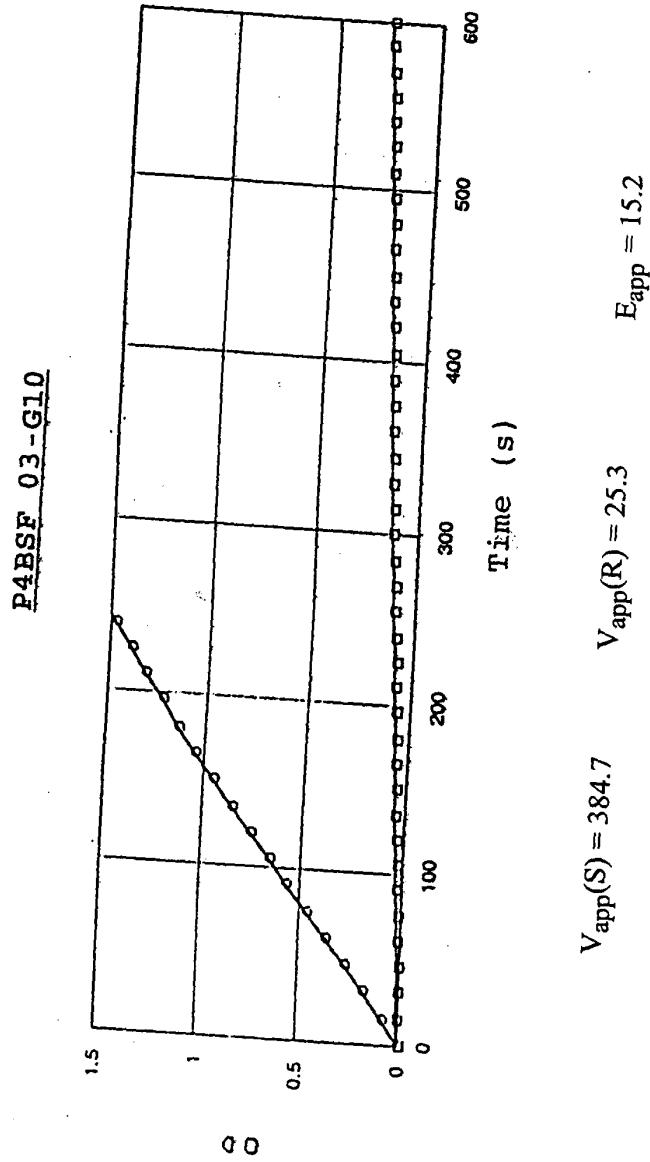


FIG. 1G



Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
PSB 14-C11
P4BSF 03-G10

		10																		
G	G	A	T	C	C	C	C	-	G	G	T	T	C	T	C	C	C	G	G	19
G	G	A	T	C	C	C	C	C	G	G	T	T	C	T	C	C	C	G	G	20
G	G	A	T	C	C	C	C	C	G	G	T	T	C	T	C	C	C	G	G	20
G	G	A	T	C	C	C	C	C	G	G	T	T	C	T	C	C	C	G	G	20
G	G	A	T	C	C	C	C	C	G	G	T	T	C	T	C	C	C	G	G	20
G	G	A	T	C	C	C	C	C	G	G	T	T	C	T	C	C	C	G	G	20
G	G	A	T	C	C	C	C	C	G	G	T	T	C	T	C	C	C	G	G	20
G	G	A	T	C	C	C	C	C	G	G	T	T	C	T	C	C	C	G	G	20

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
PSB 14-C11
P4BSF 03-G10

	20	30																		
A	A	G	G	A	T	T	C	G	G	G	C	G	A	T	G	G	C	T	G	39
A	A	G	G	A	T	T	C	G	G	G	C	G	A	T	G	G	C	T	G	40
A	A	G	G	A	T	T	C	G	G	G	C	G	A	T	G	G	C	T	G	40
A	A	G	G	A	T	T	C	G	G	G	C	G	A	T	G	G	C	T	G	40
A	A	G	G	A	T	T	C	G	G	G	C	G	A	T	G	G	C	T	G	40
A	A	G	G	A	T	T	C	G	G	G	C	G	A	T	G	G	C	T	G	40
A	A	G	G	A	T	T	C	G	G	G	C	G	A	T	G	G	C	T	G	40
A	A	G	G	A	T	T	C	G	G	G	C	G	A	T	G	G	C	T	G	40

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
PSB 14-C11
P4BSF 03-G10

	40	50																			
G	C	A	G	G	A	C	G	C	G	C	C	C	C	C	C	C	C	G	G	C	59
G	C	A	G	G	A	C	G	C	G	C	C	C	C	C	C	C	C	G	G	C	60
G	C	A	G	G	A	C	G	C	G	C	C	C	C	C	C	C	C	G	G	C	60
G	C	A	G	G	A	C	G	C	G	C	C	C	C	C	C	C	C	G	G	C	60
G	C	A	G	G	A	C	G	C	G	C	C	C	C	C	C	C	C	G	G	C	60
G	C	A	G	G	A	C	G	C	G	C	C	C	C	C	C	C	C	G	G	C	60
G	C	A	G	G	A	C	G	C	G	C	C	C	C	C	C	C	C	G	G	C	60
G	C	A	G	G	A	C	G	C	G	C	C	C	C	C	C	C	C	G	G	C	60

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
PSB 14-C11
P4BSF 03-G10

	60	70																		
C	C	A	T	C	A	A	C	C	T	G	A	G	A	T	G	A	G	A	A	79
C	C	A	T	C	A	A	C	C	T	G	A	G	A	T	G	A	G	A	A	80
C	C	A	T	C	A	A	C	C	T	G	A	G	A	T	G	A	G	A	A	80
C	C	A	T	C	A	A	C	C	T	G	A	G	A	T	G	A	G	A	A	80
C	C	A	T	C	A	A	C	C	T	G	A	G	A	T	G	A	G	A	A	80
C	C	A	T	C	A	A	C	C	T	G	A	G	A	T	G	A	G	A	A	80
C	C	A	T	C	A	A	C	C	T	G	A	G	A	T	G	A	G	A	A	80
C	C	A	T	C	A	A	C	C	T	G	A	G	A	T	G	A	G	A	A	80

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
PSB 14-C11
P4BSF 03-G10

	80	90																		
C	A	A	C	A	T	G	A	A	G	A	A	G	A	A	G	T	C	T	C	99
C	A	A	C	A	T	G	A	A	G	A	A	G	A	A	G	T	A	T	C	100
C	A	A	C	A	T	G	A	A	G	A	A	G	A	A	G	T	C	T	C	100
C	A	A	C	A	T	G	A	A	G	A	A	G	A	A	G	T	C	T	C	100
C	A	A	C	A	T	G	A	A	G	A	A	G	A	A	G	T	C	T	C	100
C	A	A	C	A	T	G	A	A	G	A	A	G	A	A	G	T	C	T	C	100
C	A	A	C	A	T	G	A	A	G	A	A	G	A	A	G	T	C	T	C	100
C	A	A	C	A	T	G	A	A	G	A	A	G	A	A	G	T	C	T	C	100

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
PSB 14-C11
P4BSF 03-G10

	100	110																		
T	G	C	T	C	C	C	C	C	T	C	G	G	C	C	T	G	G	C	C	119
T	G	C	T	C	C	C	C	C	T	C	G	G	C	C	T	G	G	C	C	120
T	G	C	T	C	C	C	C	C	T	C	G	G	C	C	T	G	G	C	C	120
T	G	C	T	C	C	C	C	C	T	C	G	G	C	C	T	G	G	C	C	120
T	G	C	T	C	C	C	C	C	T	C	G	G	C	C	T	G	G	C	C	120
T	G	C	T	C	C	C	C	C	T	C	G	G	C	C	T	G	G	C	C	120
T	G	C	T	C	C	C	C	C	T	C	G	G	C	C	T	G	G	C	C	120

FIG. 2A



Wild type
 P1B 01-H1
 P1B 01-E4
 P2B 08-H3
 P3B 13-D10
 P4B 04-H3
 P5B 14-C11
 P4BSF 03-G10

	120	130	
A	T C G G T C T C G C C T C T C T C T C G C	139	
A	T C G G T C T C G C C T C T C T C T C G C	140	
A	T C G G T C T C G C C T C T C T C T C G C	140	
A	T C G G T C T C G C C T C T C T C T C G C	140	
A	T C G G T C T C G C C T C T C T C T C G C	140	
A	T C G G T C T C G C C T C T C T C T C G C	140	
A	T C G G T C T C G C C T C T C T C T C G C	140	
A	T C G G T C T C G C C T C T C T C T C G C	140	
A	T C G G T C T C G C C T C T C T C T C G C	140	

Wild type
 P1B 01-H1
 P1B 01-E4
 P2B 08-H3
 P3B 13-D10
 P4B 04-H3
 P5B 14-C11
 P4BSF 03-G10

	140	150	
T	G C C A G C C C T C T G A T C C A G G	159	
T	G C C A G C C C T C T G A T C C A G G	160	
T	G C C A G C C C T C T G A T C C A G G	160	
T	G C C A G C C C T C T G A T C C A G G	160	
T	G C C A G C C C T C T G A T C C A G G	160	
T	G C C A G C C C T C T G A T C C A G G	160	
T	G C C A G C C C T C T G A T C C A G G	160	
T	G C C A G C C C T C T G A T C C A G G	160	
T	G C C A G C C C T C T G A T C C A G G	160	

Wild type
 P1B 01-H1
 P1B 01-E4
 P2B 08-H3
 P3B 13-D10
 P4B 04-H3
 P5B 14-C11
 P4BSF 03-G10

	160	170	
C	C A G C A C C T A C A C C C A G A C C	179	
C	C A G C A C C T A C A C C C A G A C C	180	
C	C A G C A C C T A C A C C C A G A C C	180	
C	C A G C A C C T A C A C C C A G A C C	180	
C	C A G C A C C T A C A C C C A G A C C	180	
C	C A G C A C C T A C A C C C A G A C C	180	
C	C A G C A C C T A C A C C C A G A C C	180	
C	C A G C A C C T A C A C C C A G A C C	180	

Wild type
 P1B 01-H1
 P1B 01-E4
 P2B 08-H3
 P3B 13-D10
 P4B 04-H3
 P5B 14-C11
 P4BSF 03-G10

	180	190	
A	A A A T A C C C C A T C G T G C T G G C	199	
A	A A A T A C C C C A T C G T G C T G G C	200	
A	A A A T A C C C C A T C G T G C T G G C	200	
A	A A A T A C C C C A T C G T G C T G G C	200	
A	A A A T A C C C C A T C G T G C T G G C	200	
A	A A A T A C C C C A T C G T G C T G G C	200	
A	A A A T A C C C C A T C G T G C T G G C	200	
A	A A A T A C C C C A T C G T G C T G G C	200	

Wild type
 P1B 01-H1
 P1B 01-E4
 P2B 08-H3
 P3B 13-D10
 P4B 04-H3
 P5B 14-C11
 P4BSF 03-G10

	200	210	
C	C A C G G C A T G C T C G G C T T T C G	219	
C	C A C G G C A T G C T C G G C T T T C G	220	
C	C A C G G C A T G C T C G G C T T T C G	220	
C	C A C G G C A T G C T C G G C T T T C G	220	
C	C A C G G C A T G C T C G G C T T T C G	220	
C	C A C G G C A T G C T C G G C T T T C G	220	
C	C A C G G C A T G C T C G G C T T T C G	220	
C	C A C G G C A T G C T C G G C T T T C G	220	

Wild type
 P1B 01-H1
 P1B 01-E4
 P2B 08-H3
 P3B 13-D10
 P4B 04-H3
 P5B 14-C11
 P4BSF 03-G10

	220	230	
A	C A A A C A T C C T C G G G G G T C G A C	239	
A	C A A A C A T C C T C G G G G G T C G A C	240	
A	C A A A C A T C C T C G G G G G T C G A C	240	
A	C A A A C A T C C T T G G G G G T C G A C	240	
A	C A A A C A T C C T T G G G G G T C G A C	240	
A	C A A A C A T C C T T G G G G G T C G A C	240	
A	C A A A C A T C C T T G G G G G T C G A C	240	
A	C A A A C A T C C T T G G G G G T C G A C	240	
A	C A A A C A T C C T T G G G G G T C G A C	240	

FIG. 2B



Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

240	250			
T A C T G G T T C G G C A T T T C C C C A G	259			
T A C T G G T T C G G C A T T T C C C C A G	260			
T A C T G G T T C G G C A T T T C C C C A G	260			
T A C T G G T T C G G C A T T T C C C C A G	260			
T A C T G G T T C G G C A T T T C C C C A G	260			
T A C T G G T T C G G C A T T T C C C C A G	260			
T A C T G G T T C G G C A T T T C C C C A G	260			
T A C T G G T T C G G C A T T T C C C C A G	260			

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

260	270			
C G C C T T G C G C C G T G A C G G T G	279			
C G C C T T G C G C C G T G A C G G T G	280			
C G C C T T G C G C C G T G A C G G T G	280			
C G C C T T G C G C C G T G A C G G T G	280			
C G C C T T G C G C C G T G A C G G T G	280			
C G C C T T G C G C C G T G A C G G T G	280			
C G C C T T G C G C C G T G A C G G T G	280			
C G C C T T G C G C C G T G A C G G T G	280			

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

280	290			
C C C A G G T C T A C G T C A C C C G A A	299			
C C C A G G T C T A C G T C A C C C G A A	300			
C C C A G G T C T A C G T C A C C C G A A	300			
C C C A G G T C T A C G T C A C C C G A A	300			
C C C A G G T C T A C G T C A C C C G A A	300			
C C C A G G T C T A C G T C A C C C G A A	300			
C C C A G G T C T A C G T C A C C C G A A	300			

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

300	310			
G T C A G G C C A G T T T G G A C A C C C T C	319			
G T C A G G C C A G T T T G G A C A C C C T C	320			
G T C A G G C C A G T T T G G A C A C C C T C	320			
G T C A G G C C A G T T T G G A C A C C C T C	320			
G G C A G G C C A G T T T G G A C A C C C T C	320			
G G C A G G C C A G T T T G G A C A C C C T C	320			
G G C A G G C C A G T T T G G A C A C C C T C	320			
G G C A G G C C A G T T T G G A C A C C C T C	320			

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

320	330			
G G A A G T C C G C G G C G A G C A G T	339			
G G A A G T C C G C G G C G A G C A G T	340			
G G A A G T C C G C G G C G A G C A G T	340			
G G A A G T C C G C G G C G A G C A G T	340			
G G A A G T C C G C G G C G A G C A G T	340			
G G A A G T C C G C G G C G A G C A G T	340			
G G A A G T C C G C G G C G A G C A G T	340			
G G A A G T C C G C G G C G A G C A G T	340			

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

340	350			
T G C T G C A A C A G G T G G A G G G A A	359			
T G C T G C A A C A G G T G G A G G G A A	360			
T G C T G C A A C A G G T G G A G G G A A	360			
T G C T G C A A C A G G T G G A G G G A A	360			
T G C T G C A A C A G G T G G A G G G A A	360			
T G C T G C A A C A G G T G G A G G G A A	360			
T G C T G C A A C A G G T G G A G G G A A	360			
T G C T G C A A C A G G T G G A G G G A A	360			

FIG. 2C



	360	370	
Wild type.			
P1B 01-H1	A T C G T C G C C C T C A G G G G C C A		379
P1B 01-E4	A T C G T C G C C C T C A G G G G C C A		380
P2B 08-H3	A T C G T C G C C C T C A G G G G C C A		380
P3B 13-D10	A T C G T C G C C C T C A G G G G C C A		380
P4B 04-H3	A T C G T C G C C C T C A G G G G C C A		380
PSB 14-C11	A T C G T C G C C C T C A G G G G C C A		380
P4BSF 03-G10	A T C G T C G C C C T C A G G G G C C A		380
	380	390	
Wild type			
P1B 01-H1	G C C C C A A G G T C A A A C C T G A T C G		399
P1B 01-E4	G C C C C A A G G T C A A A C C T G A T C G		400
P2B 08-H3	G C C C C A A G G T C A A A C C T G A T C G		400
P3B 13-D10	G C C C C A A G G T C A A A C C T G A T C G		400
P4B 04-H3	G C C C C A A G G T C A A A C C T G A T C G		400
PSB 14-C11	G C C C C A A G G T C A A A C C T G A T C G		400
P4BSF 03-G10	G C C C C A A G G T C A A A C C T G A T C G		400
	400	410	
Wild type			
P1B 01-H1	G C C A C A G C C A C G G G C G G G C C G		419
P1B 01-E4	G C C A C A G C C A C G G G C G G G C C G		420
P2B 08-H3	G C C A C A G C C A C G G G C G G G C C G		420
P3B 13-D10	G C C A C A G C C A C G G G C G G G C C G		420
P4B 04-H3	G C C A C A G C C A C G G G C G G G C C G		420
PSB 14-C11	G C C A C A G C C A C G G G C G G G C C G		420
P4BSF 03-G10	G C C A C A G C C A C G G G C G G G C C G		420
	420	430	
Wild type			
P1B 01-H1	A C C A T C C G C T A C G T C G C C G C		439
P1B 01-E4	A C C A T C C G C T A C G T C G C C G C		440
P2B 08-H3	A C C A T C C G C T A C G T C G C C G C		440
P3B 13-D10	A C C A T C C G C T A C G T C G C C G C		440
P4B 04-H3	A C C A T C C G C T A C G T C G C C G C		440
PSB 14-C11	A C C A T C C G C T A C G T C G C C G C		440
P4BSF 03-G10	A C C A T C C G C T A C G T C G C C G C		440
	440	450	
Wild type			
P1B 01-H1	C G T A C G T C C C G A C C T G A T C G		459
P1B 01-E4	C G T A C G T C C C G A C C T G A T C G		460
P2B 08-H3	C G T A C G T C C C G A C C T G A T C G		460
P3B 13-D10	C G T A C G T C C C G A C C T G A T C G		460
P4B 04-H3	C G T A C G T C C C G A C C T G A T C G		460
PSB 14-C11	C G T A C G T C C C G A C C T G A T C G		460
P4BSF 03-G10	C G T A C G T C C C G A C C T G A T C G		460
	460	470	
Wild type			
P1B 01-H1	C T T C C G C C A C C C A G G C G T C G G C		479
P1B 01-E4	C T T C C G C C A C C C A T C A G G C G T C G G C		480
P2B 08-H3	C T T C C G C C A C C C A C C A G G C G T C G G C		480
P3B 13-D10	C T T C C G C C A C C C A C C A G G C G T C G G C		480
P4B 04-H3	C T T C C G C C A C C C A C C A G G C G T C G G C		480
PSB 14-C11	C T T C C G C C A C C C A C C A G G C G T C G G C		480
P4BSF 03-G10	C T T C C G C C A C C C A G G C G T C G G C		480

FIG. 2D



Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

520	530	
A	G	A
T	C	C
C	A	C
G	G	G
G	T	T
T	C	G
C	G	C
G	G	C
A	G	A
T	C	C
C	A	C
G	G	G
G	T	T
T	C	G
C	G	C
G	G	C
A	G	A
T	C	C
C	A	C
G	G	G
G	T	T
T	C	G
C	G	C
G	G	C
A	G	A
T	C	C
C	A	C
G	G	G
G	T	T
T	C	G
C	G	C
G	G	C
A	G	A
T	C	C
C	A	C
G	G	G
G	T	T
T	C	G
C	G	C
G	G	C

Wild type

P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

FIG. 2E



	600	610	
Wild type			
P1B 01-H1	A G C G G G C A [A] G C A C C C G G T A C G C A		619
P1B 01-E4	A G C G G G C G G C A C C G G T A C G C A		620
P2B 08-H3	A G C G G G C G G C A C C G G T A C G C A		620
P3B 13-D10	A G C G G G C G G C A C C G G T A C G C A		620
P4B 04-H3	A G C G G G C G G C A C C G G T A C G C A		620
PSB 14-C11	A G C G G G C G G C A C C G G T A C G C A		620
P4BSF 03-G10	A G C G G G C G G C A [T] C G G T A C G C A		620
	620	630	
Wild type			
P1B 01-H1	G A A T T T C A C T G G G C T C G C T G G		639
P1B 01-E4	G A A T T T C A C T G G G C T C G C T G G		640
P2B 08-H3	G A A T T T C A C T G G G C T C G C T G G		640
P3B 13-D10	G A A T T T T A C T G G G C T C G C T G G		640
P4B 04-H3	G A A T T T T A C T G G G C T C G C T G G		640
PSB 14-C11	G A A T T T T A C T G G G C T C G C T G G		640
P4BSF 03-G10	G A A T T T T T C T G G G C T C G C T G G		640
	640	650	
Wild type			
P1B 01-H1	A G T C G C T G A A C A G C G A G G G T		659
P1B 01-E4	A G T C G C T G A A C A G C G A G G G T		660
P2B 08-H3	A G T C G C T G A A C A G C G A G G G T		660
P3B 13-D10	A G T C G C T G A A C A G C G A G G G T		660
P4B 04-H3	A G T C G C T G A A C A G C G A G G G T		660
PSB 14-C11	A G T C G C T G A A C A G C G A G G G T		660
P4BSF 03-G10	A G T C G C T G A A C A G C G A G G G T		660
	660	670	
Wild type			
P1B 01-H1	G C C G C G C G C T T C A A C G C C C A A		679
P1B 01-E4	G C C G C G C G C T T C A A C G C C C A A		680
P2B 08-H3	G C C G C G C G C T T C A A C G C C C A A		680
P3B 13-D10	G C C G C G C G C T T C A A C G C C C A A		680
P4B 04-H3	G C C G C G C G C T T C A A C G C C C A A		680
PSB 14-C11	G C C G C G C G C T T C A A C G C C C A A		680
P4BSF 03-G10	G C C G C G C G C T T C A A C G C C C A A		680
	680	690	
Wild type			
P1B 01-H1	G T A C C C C G C A G G G G C A T C C C C A		699
P1B 01-E4	G T A C C C C G C A G G G G C A T C C C C A		700
P2B 08-H3	G T A C C C C G C A G G G G C A T C C C C A		700
P3B 13-D10	G T A C C C C G C A G G G G C A T C C C C A		700
P4B 04-H3	G T A C C C C G C A G G G G C A T C C C C A		700
PSB 14-C11	G T A C C C C G C A G G G G C A T C C C C A		700
P4BSF 03-G10	G T A C C C C G C A G G G G C A T C C C C A		700
	700	710	
Wild type			
P1B 01-H1	C C T C G G C C T G C G G C G A A G G C		719
P1B 01-E4	C C T C G G C C T G C G G C G A A G G C		720
P2B 08-H3	C C T C G G C C T G C G G C G A A G G C		720
P3B 13-D10	C C T C G G C C T G C G G C G A A G G C		720
P4B 04-H3	C C T C G G C C T G C G G C G A A G G C		720
PSB 14-C11	C C T C G G C C T G C G G C G A A G G C		720
P4BSF 03-G10	C C T C G G C C T G C G G C G A A G G C		720

FIG. 2F



Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

720	730	
G C C T A C A A G G T C A A A C G G G C G T		739
G C C T A C A A G G T C A A A C G G G C G T		740
G C C T A C A A G G T C A A A C G G G C G T		740
G C C T A C A A G G T C A A A C G G G C G T		740
G C C T A C A A G G T C A A A C G G G C G T		740
G C T A C A A G G T C A A A C G G G C G T		740
G C T A C A A G G T C A A A C G G G C G T		740
G C C T A C A A G G T C A A A C G G G C G T		740

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

740	750	
G A G C T A T T A C T C C T G G A G C G		759
G A G C T A T T A C T C C T G G A G C G		760
G A G C T A T T A C T C C T G G A G C G		760
G A G C T A T T A C T C C T G G A G C G		760
G A G C T A T T A C T C C T G G A G C G		760
G A G C T A T T A C T C C T G G A G C G		760
G A G C T A T T A C T C C T G G A G C G		760
G A G C T A T T A C T C C T G G A G C G		760

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

760	770	
G T T C C T C G C C G C T G A C C A A C		779
G T T C C T C G C C G C T G A C C A A C		780
G T T C C T C G C C G C T G A C C A A C		780
G T T C C T C G C C G C T G A C C A A C		780
G T T C C T C G C C G C T G A C C A A C		780
G T T C C T C G C C G C T G A C C A A C		780
G T T C C T C G C C G C T G A C C A A C		780
G T T C C T C G C C G C T G A C C A A C		780

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

780	790	
T T C C T C G A T C C G A G C G A C G C		799
T T C C T C G A T C C G A G C G A C G C		800
T T C C T C G A T C C G A G C G A C G C		800
T T C C T C G A T C C G A G C G A C G C		800
T T C C T C G A T C C G A G C G A C G C		800
T T C C T C G A T C C G A G C G A C G C		800
T T C C T C G A T C C G A G C G A C G C		800
T T C C T C G A T C C G A G C G A C G C		800

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

800	810	
C T T C C T C G G C G C C T C G T C G C		819
C T T C C T C G G C G C C T C G T C G C		820
C T T C C T C G G C G C C T C G T C G C		820
C T T C C T C G G C G C C T C G T C G C		820
C T T C C T C G G C G C C T C G T C G C		820
C T T C C T C G G C G C C T C G T C G C		820
C T T C C T C G G C G C C T C G T C G C		820

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

820	830	
T G A C C T T C A A G A A C G G G C A C C		839
T G A C C T T C A A G A A C G G G C A C C		840
T G A C C T T C A A G A A C G G G C A C C		840
T G A C C T T C A A G A A C G G G C A C C		840
T G A C C T T C A A G A A C G G G C A C C		840
T G A C C T T C A A G A A C G G G C A C C		840
T G A C C T T C A A G A A C G G G C A C C		840

FIG. 2G



	840	850	
Wild type			
P1B 01-H1	G C C A A C G A C G G C C T G G T C G G		859
P1B 01-E4	G C C A A C G A C G G C C T G G T C G G		860
P2B 08-H3	G C C A A C G A C G G C C T G G T C G G		860
P3B 13-D10	G C C A A C G A C G G C C T G G T C G G		860
P4B 04-H3	G C C A A C G A C G G C C T G G T C G G		860
P5B 14-C11	G C C A A C G A C G G C C T G G T C G G		860
P4BSF 03-G10	G C C A A C G A C G G C C T G G T C G G		860
	860	870	
Wild type			
P1B 01-H1	C A C C T G C A G T T C G C A C C C T G G		879
P1B 01-E4	C A C C T G C A G T T C G C A C C C T G G		880
P2B 08-H3	C A C C T G C A G T T C G C A C C C T G G		880
P3B 13-D10	C A C C T G C A G T T C G C A C C C T G G		880
P4B 04-H3	C A C C T G C A G T T C G C A C C C T G G		880
P5B 14-C11	C A C C T G C A G T T C G C A C C C T G G		880
P4BSF 03-G10	C A C C T G C A G T T C G C A C C C T G G		880
	880	890	
Wild type			
P1B 01-H1	G C A T G G T G A T C C G C G A C A A C		899
P1B 01-E4	G C A T G G T G A T C C G C G A C A A C		900
P2B 08-H3	G C A T G G T G A T C C G C G A C A A C		900
P3B 13-D10	G C A T G G T G A T C C G C G A C A A C		900
P4B 04-H3	G C A T G G T G A T C C G C G A C A A C		900
P5B 14-C11	G C A T G G T G A T C C G C G A C A A C		900
P4BSF 03-G10	G C A T G G T G A T C C G C G A C A A C		900
	900	910	
Wild type			
P1B 01-H1	T A C C G G A T G A A C C A C C T G G A		919
P1B 01-E4	T A C C G G A T G A A C C A C C T G G A		920
P2B 08-H3	T A C C G G A T G A A C C A C C T G G A		920
P3B 13-D10	T A C C G G A T G A A C C A C C T G G A		920
P4B 04-H3	T A C C G G A T G A A C C A C C T G G A		920
P5B 14-C11	T A C C G G A T G A A C C A C C T G G A		920
P4BSF 03-G10	T A C C G G A T G A A C C A C C T G G A		920
	920	930	
Wild type			
P1B 01-H1	C G A G G G T G A A C C A G G G T C T T C G		939
P1B 01-E4	C G A G G G T G A A C C A G G G T C T T C G		940
P2B 08-H3	C G A G G G T G A A C C A G G G T C T T C G		940
P3B 13-D10	C G A G G G T G A A C C A G G G T C T T C G		940
P4B 04-H3	C G A G G G T G A A C C A G G G T C T T C G		940
P5B 14-C11	C G A G G G T G A A C C A G G G T C T T C G		940
P4BSF 03-G10	C G A G G G T G A A C C A G G G T C T T C G		940
	940	950	
Wild type			
P1B 01-H1	G C C T C A C C C A G C C T G T T C G A G		959
P1B 01-E4	G C C T C A C C C A G C C T G T T C G A G		960
P2B 08-H3	G C C T C A C C C A G C C T G T T C G A G		960
P3B 13-D10	G C C T C A C C C A G C C T G T T C G A G		960
P4B 04-H3	G C C T C A C C C A G C C T G T T C G A G		960
P5B 14-C11	G C C T C A C C C A G C C T G T T C G A G		960
P4BSF 03-G10	G C C T C A C C C A G C C T G T T C G A G		960

FIG. 2H



Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
PSB 14-C11
P4BSF 03-G10

Wild type

P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P4B 04-H3
P5B 14-C11
P4BSF 03-G10

1040	C C C G G G C C	1041
	C C C G G G C C C	1045
	C C C G G G C C C	1045
	C C C G G G C C C	1045
	C C C G G G C C C	1045
	C C C G G G C C C	1045
	C C C G G G C C C	1050
	C C C G G G C C C	1045
	C C C G G G C C C	1045

FIG. 2I